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10/691,404	10/21/2003	Michael Brunn	4285-7	6839

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EXAMINER

NGUYEN, TRINH T

ART UNIT PAPER NUMBER

3644

DATE MAILED: 09/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/691,404

Applicant(s)

BRUNN, MICHAEL

Examiner

Trinh T Nguyen

Art Unit

3644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) 6, 10, 11, 16-19, 21, 30, 32, 33 and 35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-9, 12, 13, 15, 20, 22-29, 31, 34 and 36-38 is/are rejected.
- 7) ☒ Claim(s) 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/21/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Election/Restriction***

1. Applicant's election (filed on 6/1/04) with traverse of Species 1 (which is directed to claims 1-5, 7-9, 12-15, 20, 22-29, 31, 34, and 36-38) is acknowledged.

Claims 6,10,11,16-19,21,30,32,33, and 35 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. The traversal is on the ground(s) that the Examiner has failed to make a prima facie showing of a serious burden. This is not found persuasive because as clearly shown in the Office Action dated 4/27/04 there are a plurality of patentably distinct species in the claimed invention. Therefore, it is noted that an additional set of species would require additional searches and thus it would be a burden on the Examiner.

The requirement is still deemed proper and is therefore made FINAL.

***Priority***

2. Applicant's claim for domestic priority (i.e., Provisional Application Number 60/419,891) under 35 U.S.C. 119(e) is acknowledged.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 1-5, 7, 8, 20, 22-29, 34, and 36-38 are rejected under 35 U.S.C. 102(b) as being anticipated by Hori et al. (US 3,062,144).

Hori et al. disclose a similar crash-bang cartridge as that of the Applicant (see Applicant's drawing Figure 3 and paragraphs [0007] and [0008] in Applicant's specification). Further note that Hori et al.'s reference numbers (44, 45, 46, 48, 42 in lines 55-65 of col. 2 of Hori et al.) can be interpreted as a weighty and frangible ballast which locates on a leading edge of the projectile, at an end of the tubular projectile casing (32) opposite from the end having the delay block, wherein a weight of said ballast is sufficient to provide stability and accuracy in flight, and wherein an at least one material (42) comprising the weighty and frangible ballast is sufficiently frangible that, after detonation of said flash charge, the at least one material comprises low mass, low energy components.

#### **Claim Rejections – 35 USC § 103**

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 9 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hori et al. (US 3,062,144) in view of Abbott (US 4,162,645).

Hori et al. disclose most of the claimed invention except for the weighty and frangible ballast is consolidated at said solid end of the cup by pressing a ram over the metallic particles.

Abbott teaches a method of making a cartridge wherein a plurality of ram members (151, 173) were used to perform a pressing process (note that ram members 151 & 173 are capable of pressing/consolidating metallic particles into a cup). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the crash-band cartridge assembly of Hori et al. so as to include the use of a ram member to press the metallic particles into the cup, in a similar manner as taught in Abbott, since to do so would provide a more efficient method of pressing/consolidating metallic particles therein.

7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hori et al. (US 3,062,144) in view of Rothman (US 3,323,456).

Hori et al. disclose most of the claimed invention except for the weighty and frangible ballast comprises at least one of zinc particles, lead particles, graphite particles, and tungsten particles.

Rothman teaches that it is old and well known to provide a weighty and frangible ballast (35) comprises at least one of zinc particles, lead particles, graphite particles, and tungsten particles (see lines 1-5 of col. 5). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the crash-band cartridge assembly of Hori et al. so as to include a weighty and frangible ballast comprises at least one of zinc particles, lead particles, graphite particles, and tungsten particles, in a similar as taught in Rothman, since by having at least one of zinc and lead particles as a weighty and frangible ballast would provide a more effective ballistic weight and thus aid in extending the range of the projectile.

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8. Claims 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hori et al. (US 3,062,144).

For claim 13, Hori et al. is silent about having at least one material comprising the weighty and frangible ballast comprises a mixture of zinc powder and graphite powder. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select such a mixture of material, since it has been held to be within the general skill of a worker in the art to select a known mixture of material on the basis of its suitability for the intended use as a matter of obvious material design choice. Furthermore, it is believe that through trial and error in testing procedure that one comes up with this mixture of material to meet the require design criteria for manufacturing of the material of the weighty and frangible ballast.

For claim 15, Hori et al. is silent about having the ratio of zinc powder to graphite powder controls a degree of frangibility of the weighty and frangible ballast. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the ratio of zinc powder to graphite powder controls a degree of frangibility of the weighty and frangible ballast, since it has been held that where routine testing and general experimental conditions are present, discovering the optimum or workable ranges/ratio involves only routine skill in the art. Also, since applicant did not provide a reason and/or showing any criticality as to what ratio which needs to be to control the degree of frangibility of the weighty and frangible ballast, it is believe that through trial and error during the manufacturing process that one comes up with the ratio to meet the design criteria.

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***Allowable Subject Matter***

9. Claim 14 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**Conclusion**

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure as cited in form PTO-892.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trinh T Nguyen whose telephone number is (703) 306-9082. The examiner can normally be reached on M-F (9:30 A.M to 6:00 P.M).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teri Luu can be reached on (703) 305-7421. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7687.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.



Trinh Nguyen  
Patent Examiner, AU 3644  
09/03/04